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USGS Seismometer Picket Fence for Early Earthquake Warning in Advanced LIGO[1] ANNE BAER, GRACE JOHNS, Christopher Newport Univ, BRIAN LANTZ, Stanford University, RYAN FISHER, Christopher Newport Univ, LIGO COLLABORATION — The Advanced LIGO instruments are sensitive to ground vibrations caused by earthquakes across the globe, and large enough vibrations can cause the loss of the optical cavity lock for the interferometers. The Hanford and Livingston interferometers have recently added an operating mode to maintain lock despite large ground motion, but this mode works best when engaged before the vibrations begin. This presentation will describe a current project to use USGS seismometer data to provide a low-latency warning system for the Hanford site to enable the prompt activation of the "earthquake mode". The data will be continuously gathered from seismometer stations 200-400 km from the Hanford and Livingston sites, with the goal of providing sufficient warning of incoming surface waves.

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